

WHAT IS CLAIMED IS:

1. A mattress system, comprising:
a mattress having a top surface and a bottom surface;
a cavity arranged in the mattress, the cavity being open at least toward the top surface and having a defined size; and
an expandable cushion arranged in the cavity.
2. The system according to claim 1, further comprising:
a control system operatively coupled with the cushion to control an expansion and contraction of the cushion.
3. The system according to claim 2, further comprising:
a mattress protector covering at least the top surface of the mattress, the protector including a portion that extends into the cavity and over the expandable cushion arranged in the cavity.
4. The system according to claim 3, further comprising:
a retainer arranged in the mattress between the top and bottom surfaces on a periphery of the cavity, the retainer being configured to secure a periphery of the portion of the mattress protector that extends into the cavity.
5. The system according to claim 4, wherein the retainer is a ring embedded into the mattress.

6. The system according to claim 4, wherein the retainer fits within an indenture on the periphery of the cavity.

7. The system according to claim 3, further comprising:
a bedsheet adapted to fit over at least the top surface of the mattress.

8. The system according to claim 7, wherein the bedsheet has an opening located to correspond with the cavity in the mattress to allow access thereto.

9. The system according to claim 8, wherein the opening is one of a fly opening and a slit with a flap opening.

10. The system according to claim 7, further comprising:
an underpad adapted to be placed on top of the bedsheet and including a portion that extends into the cavity and over the expandable cushion arranged in the cavity.

11. The system according to claim 1, wherein the expandable cushion is an inflatable cushion, the control unit operating to inflate and deflate the cushion to raise and lower the cushion within the cavity.

12. The system according to claim 11, wherein the inflatable cushion includes an elastic material at least on sides of the cushion, the elastic material

being configured to stretch when the cushion is inflated and contract the cushion to a defined size when deflated.

13. The system according to claim 1, further comprising:

a human waste container arrangeable over the expandable cushion within the cavity in an unexpanded state of the cushion, the human waste container being raised and lowered within the cavity by the expansion and contraction of the cushion.

14. The system according to claim 13, wherein the human waste container is a bedpan.

15. The system according to claim 1, further comprising:

a human waste container arrangeable over the expandable cushion within the cavity in an unexpanded state of the cushion,

a support ring adapted to mate with at least a portion of the cavity opening and being supported on the top surface of the mattress; and

wherein the human waste container is a wastebag, the wastebag being secured by the support ring and extending into the cavity.

16. The system according to claim 15, wherein the wastebag includes an elastic edge to secure the wastebag to the support ring.

17. The system according to claim 11, further comprising:

a human waste container arrangeable over the expandable cushion within the cavity in an unexpanded state of the cushion, the human waste container being raised and lowered within the cavity by the expansion and contraction of the cushion.

18. The system according to claim 17, wherein the human waste container is a bedpan.

19. The system according to claim 11, further comprising:

a human waste container arrangeable over the expandable cushion within the cavity in an unexpanded state of the cushion,

a support ring adapted to mate with at least a portion of the cavity opening and being supported on the top surface of the mattress; and

wherein the human waste container is a wastebag, the wastebag being secured by the support ring and extending into the cavity.

20. The system according to claim 19, wherein the support ring is under tension.

21. The system according to claim 2, wherein the control system comprises:

a fluidic pump arranged to pump fluid into the expandable cushion;

a fluid relief mechanism arranged to allow fluid to escape the expandable cushion; and

a control switch operatively coupled with the fluidic pump and relief mechanism to control expansion and contraction of the expandable cushion.

22. The system according to claim 21, wherein the fluid is air, the control switch controlling an inflation and deflation of the expandable cushion.

23. The system according to claim 21, wherein the fluid relief mechanism is a vacuum pump.

24. The system according to claim 23, wherein the expandable cushion is filled with a foam material.

25. The system according to claim 21, wherein the control switch is a remote control switch.

26. The system according to claim 2, wherein the control system is operatively coupled to a spring device within the cushion.

27. The system according to claim 1, wherein in an expanded state, a top surface of the cushion is substantially flush with the top surface of the mattress.

28. The system according to claim 1, wherein in an expanded state, a top surface of the cushion is located below the top surface of the mattress, and further comprising a mattress-like product, the mattress-like product filling a volume of the cavity between the top surface of the cushion in the expandable state and the top surface of the mattress.

29. The system according to claim 1, wherein the expandable cushion comprises a series of expandable chambers.

30. The system according to claim 22, wherein the expandable cushion is equipped with ventilation openings and wherein said air is constantly or intermittently pumped into the cushion when in its expanded state.

31. The system according to claim 13, wherein the mattress has a defined indenture load deflection plane, the cavity, cushion and mattress being configured such that a top portion of the human waste container, when arranged over the cushion within the cavity, substantially corresponds with the defined indenture load deflection plane of the mattress.

32. A method of facilitating human excretions by a substantially bedridden person, the method comprising the acts of:

contracting an expandable cushion arranged in a cavity formed in a mattress on which the person lies;

inserting a human waste container into the cavity on top of the cushion, the contracted expandable cushion being located in a portion of the cavity below a top surface of the mattress; and

after receiving the person's excretions, removing the human waste container and expanding the cushion to fill the cavity.

33. The method according to claim 32, wherein the cushion is an inflatable and deflatable cushion.

34. The method according to claim 33, wherein the human waste container is a bedpan.

35. The method according to claim 33, wherein the human waste container is a disposable wastebag.

36. The method according to claim 32, further comprising the act of varying an expansion or contraction state of the cushion to position the human waste container in relation to the bedridden person.